

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-24 (Canceled).

Claim 25 (Currently Amended): A flat lamp comprising:

at least two glass substrates kept mutually parallel and defining an internal gas-filled space, each glass substrate having an internal surface facing in a direction of the internal space and an external surface opposite to the internal surface and facing in a direction away from the internal space; and

two electrodes, a first of the two electrodes associated with a first one of the glass substrates and a second of the two electrodes associated with a second one of the glass substrates, the two electrodes being away from the internal surface, at least one of the first and second electrodes is located on the external surface side of the respective substrate,

wherein the internal surface of at least one substrate is coated with a phosphor material,

wherein said at least one electrode on the external surface side is covered with at least one electrical insulation that may be formed by at least one of the glass substrates or be associated with at least one of the glass substrates.

Claim 26 (Previously Presented): The lamp as claimed in claim 25, wherein at least one electrode is affixed to the surface of the external face of the substrate with which it is associated and wherein the at least one electrode is covered with at least one electrical insulation, the electrode being incorporated into the surface of the glass substrate or of the electrical insulation.

Claim 27 (Previously Presented): The lamp as claimed in claim 25, wherein said at least one electrode is incorporated into the electrical insulation, either within its very thickness or on a surface.

Claim 28 (Previously Presented): The lamp as claimed in claim 26, wherein the electrical insulation is made of glass or of a transparent plastic of one of: polyvinyl butyral (PVB), ethylene/vinyl acetate (EVA), or polyethylene terephthalate (PET).

Claim 29 (Previously Presented): The flat lamp as claimed in claim 25, wherein the electrical insulation associated with the electrode is assembled with one or more other additional electrical insulations.

Claim 30 (Previously Presented): The lamp as claimed in claim 26, wherein at least one additional electrical insulation is formed by another glass substrate that is laminated to at least one glass substrate by an intermediate film that can make the two substrates adhere to each other.

Claim 31 (Previously Presented): The lamp as claimed in claim 25, wherein the electrical insulation constitutes a sheet exhibiting an optical effect.

Claim 32 (Previously Presented): The lamp as claimed in claim 25, wherein the electrodes are continuous, conducting and transparent coatings, each located on an external face side of a substrate and covering at least part of facing surfaces of the substrates.

Claim 33 (Previously Presented): The lamp as claimed in claim 32, wherein the electrodes cover all of the external faces of the glass substrates.

Claim 34 (Previously Presented): The lamp as claimed in claim 32, wherein the continuous coatings are in a form of an array of parallel band, having a bandwidth of between 3 and 15 mm, and a non-conducting space between two adjacent bands, having a width greater than the width of the bands, the coatings deposited on the two substrates being offset by 180° to prevent two opposed conducting bands of the two substrates from facing each other.

Claim 35 (Previously Presented): The lamp as claimed in claim 25, wherein the electrodes are formed from a metal oxide having electronic vacancies.

Claim 36 (Previously Presented): The flat lamp as claimed in claim 25, wherein at least one of the two electrodes is an integrated metal grid, where appropriate inserted in between two plastic sheets, or the electrode is in a form of a layer deposited on and incorporated into a plastic film.

Claim 37 (Previously Presented): The lamp as claimed in claim 25, wherein at least part of the internal face of at least one of the two substrates is coated with a phosphor material.

Claim 38 (Previously Presented): The lamp as claimed in claim 37, wherein the phosphor is selected to determine a color of illumination.

Claim 39 (Previously Presented): The lamp as claimed in claim 25, wherein spacers, made of a non-conducting material, are placed between the two glass substrates, the spacers maintaining separation between the two substrates.

Claim 40 (Previously Presented): The lamp as claimed in claim 39, wherein the separation between the two substrates is around 0.3 to 5 mm.

Claim 41 (Previously Presented): The lamp as claimed in claim 39, wherein the spacers are made of glass.

Claim 42 (Previously Presented): The lamp as claimed in claim 39, wherein a lateral surface of the spacers is coated with a phosphor material.

Claim 43 (Previously Presented): The lamp as claimed in claim 25, wherein gas pressure in the internal space is around 0.05 to 1 bar.

Claim 44 (Previously Presented): The lamp as claimed in claim 25, wherein one of the glass substrates has at least one hole drilled through its thickness that is obstructed by a seal.

Claim 45 (Previously Presented): The lamp as claimed in claim 25, wherein a contour of the glass substrates is polygonal, concave or convex, or curved with a constant or variable radius of curvature.

Claim 46 (Previously Presented): The lamp as claimed in claim 25, having two illuminating faces.

Claim 47 (Currently Amended): A process for manufacturing a lamp comprising at least two glass substrates kept mutually parallel and defining an internal gas-filled space, each of the at least two glass substrates having an internal surface facing the gas-filled space and an external surface opposite to the internal surface facing in a direction away from the gas-filled space, comprising:

associating a first of two electrodes with a first of the two glass substrates, and associating a second of the two electrodes with a second one of the glass substrates, the two electrodes being away from the internal space,

coating the internal surface of at least one substrate turned toward said internal space with a phosphor material;

affixing at least one electrode to the external surface of the substrate with which it is associated and covering the at least one electrode on the external surface side with at least one electrical insulation, the electrode being incorporated into the surface of the glass substrate or into the thickness or on the surface of the electrical insulating material, comprising:

screen-printing phosphor on at least one of the glass substrates, one of which is provided with a hole drilled through its thickness and on an opposite side from the electrode if the electrode is deposited on the same substrate;

depositing spacers on one of the glass substrates;

joining the glass substrates together to be parallel;

sealing an internal space by a peripheral sealing material;

replacing atmosphere contained in the internal space, by the hole, with plasma gas;
and

obstructing the hole by a seal;

joining at least one first electrical insulation to at least one glass substrate, the electrical insulation configured to cover or to incorporate, internally or on a surface, the electrode with which one of the faces of the substrate to be associated, or configured to cover the electrode that is associated with a second electrical insulation that is joined to the first electrical insulation.

Claim 48 (Previously Presented): Application of a lamp as claimed in claim 25 to production of architectural or decorative elements that illuminate and/or have a display function.